

DRAFT ENVIRONMENTAL ASSESSMENT

BLACKWELL LAKE CLEARING AND SNAGGING PROJECT CHIKASKIA RIVER BLACKWELL, OKLAHOMA



US Army Corps
Of Engineers
Tulsa District

APRIL 2006

FINDING OF NO SIGNIFICANT IMPACT

In accordance with the National Environmental Policy Act of 1969, including guidelines in 33 Code of Federal Regulations, Part 230, the Tulsa District has assessed the environmental impacts of a clearing and snagging project to remove a logjam at Blackwell Lake, Kay County, Oklahoma. The logjam consists of large trees and logs at the Blackwell Lake dam site that prevents the Blackwell Lake Trust Authority from operating the floodgates and performing general operations and maintenance activities at the project. Severe ice storms in 2001 resulted in higher than normal debris loads on the Chikaskia River, which has created the logjam that now is larger than the Authority can manage. The project consists of removing the logjam so the Authority can return to normal operations and maintenance activities. Backwater during high flow events causes several problems upstream of the dam including the possible flooding of approximately 200 structures and interference with the proper functioning of residential septic systems. Flooded septic systems create the potential for raw sewage to spill into Blackwell Lake, which also serves as a backup water supply for the City of Blackwell, Oklahoma. This assessment was prepared in accordance with U.S. Army Corps of Engineers Regulations, Part 230, Policy and Procedures for Implementing the National Environmental Policy Act. It has been determined from the enclosed Environmental Assessment that the project will have no significant adverse effects on the natural or human environment. Therefore, an environmental impact statement will not be prepared.

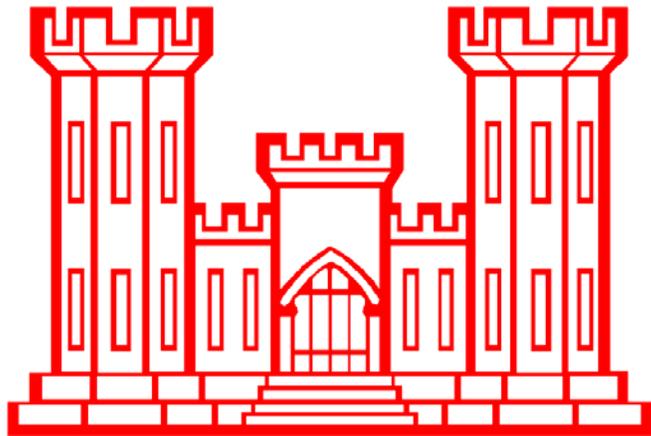
Date

Miroslav P. Kurka
Colonel, U.S. Army
District Engineer

Enclosure
Environmental Assessment

DRAFT

**Environmental Assessment for
Blackwell Lake Clearing and Snagging Project
Chikaskia River, Blackwell, Oklahoma**



**U.S. Army Corps of Engineers
Southwestern Division
Tulsa District**

April 2006

ENVIRONMENTAL ASSESSMENT ORGANIZATION

This Environmental Assessment (EA) evaluates the effects of a Section 208 Clearing and Snagging Project to remove a log jam from the Blackwell Lake dam site, Blackwell, Oklahoma. This EA will facilitate the decision process regarding the proposed action and alternatives.

<i>SECTION 1</i>	<i>AUTHORITY, PURPOSE, AND SCOPE</i> provides the authority for the proposed action, summarizes the project purpose, provides relevant background information, and describes the scope of the EA.
<i>SECTION 2</i>	<i>ALTERNATIVES</i> examines alternatives for implementing the proposed action.
<i>SECTION 3</i>	<i>PROPOSED ACTION</i> describes the recommended action.
<i>SECTION 4</i>	<i>AFFECTED ENVIRONMENT</i> describes the existing environmental and socioeconomic setting.
<i>SECTION 5</i>	<i>ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION</i> identifies the potential environmental and socioeconomic effects of implementing the proposed action and alternatives.
<i>SECTION 6</i>	<i>RESTORATION PLAN</i> summarizes the restoration prescribed for the proposed alternative.
<i>SECTION 7</i>	<i>FEDERAL, STATE, AND LOCAL AGENCY COORDINATION</i> provides a listing of individuals and agencies consulted during preparation of the EA.
<i>SECTION 8</i>	<i>REFERENCES</i> provides bibliographical information for cited sources.
<i>SECTION 9</i>	<i>APPLICABLE ENVIRONMENTAL LAWS AND REGULATIONS</i> provides a listing of environmental protection statutes and other environmental requirements.
<i>SECTION 10</i>	<i>LIST OF PREPARERS</i> identifies persons who prepared the document and their areas of expertise.
<i>APPENDICES</i>	<i>A</i> Coordination/Correspondence <i>B</i> Section 404 Permit <i>C</i> Cultural Resources Coordination <i>D</i> Public Comments (final EA only) <i>E</i> Newspaper Public Notice (final EA only)

TABLE OF CONTENTS

Section	Page
1.0 AUTHORITY, PURPOSE, AND SCOPE	1
2.0 ALTERNATIVES	1
2.1 No Action	1
2.2 Action Alternatives	4
2.3 Final Alternatives.....	5
3.0 PROPOSED ACTION	6
4.0 AFFECTED ENVIRONMENT	6
4.1 Social and Economic Conditions	7
4.2 Executive Order 12898	8
4.3 Executive Order 13045	9
4.4 Natural Resources	9
4.5 Threatened and Endangered Species	12
4.6 Cultural Resources.....	13
4.7 Water Quality	13
4.8 Air Quality	13
4.9 Hazardous, Toxic, and Radiological Waste	14
5.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION	14
5.1 Social and Economic Impacts	14
5.2 Executive Order 12898	16
5.3 Executive Order 13045	16
5.4 Natural Resource Impacts	16
5.5 Threatened and Endangered Species	17
5.6 Cultural Resources.....	17
5.7 Water Quality	17
5.8 Air Quality	18
5.9 Hazardous, Toxic, and Radiological Waste	18
5.10 Noise	18
5.11 Cumulative Impacts	18
6.0 RESTORATION PLAN.....	18
7.0 FEDERAL, STATE, AND LOCAL AGENCY COORDINATION.....	18
8.0 REFERENCES.....	19
9.0 APPLICABLE ENVIRONMENTAL LAWS AND REGULATIONS.....	20
10.0 LIST OF PREPARERS.....	21

LIST OF FIGURES

Figure	Page
1.0 Vicinity Map, Blackwell Lake Clearing and Snagging Project, Kay County, Oklahoma	2
3.0 Disposal Area	7

TABLE OF CONTENTS (Continued)

LIST OF TABLES

Table		Page
2.3	Summary of Benefits and Costs	5
5.0	Impact Assessment Matrix	15
9.0	Relationship of Plans to Environmental Protection Statutes and Other Environmental Requirements	20

LIST OF PHOTOS

Photo		Page
1.0	Blackwell Lake Dam	3
1.1	Logjam at Blackwell Lake Dam	4
4.4.2	Habitat at the disposal site	10
4.4.5	Lake is confined within the channel	12

LIST OF APPENDICES

A	Coordination/Correspondence	22
B	Section 404 Permit	40
C	Cultural Resources Coordination	42
D	Public Comments (final EA)	55
E	Newspaper Public Notice (final EA)	56

DRAFT
ENVIRONMENTAL ASSESSMENT
BLACKWELL LAKE CLEARING AND SNAGGING PROJECT
CHIKASKIA RIVER, BLACKWELL, OKLAHOMA

SECTION 1.0 AUTHORITY, PURPOSE, AND SCOPE

This study is being conducted under authority of Section 208 of the 1954 Flood Control Act, as amended by the 1974 Water Resources Development Act. The purpose of the project is to remove a logjam from the Blackwell Lake dam and spillway. Blackwell Lake is located on the Chikaskia River about three miles northwest of Braman in Kay County in north central Oklahoma (Figure 1.0). The logjam prevents the Blackwell Lake Trust Authority (Authority) from conducting normal operations and maintenance activities at the project.

Severe ice storms in 2001 caused an unusually heavy load of logs and other debris in the Chikaskia River. These heavy debris loads have collected at the Blackwell Lake dam and spillway and the resultant logjam has exceeded the maintenance capability of the Authority (Photo 1.0 and Photo 1.1). The logjam is blocking access to the gate controls of the dam structure, which has caused a significant increase in the flooding risks of the residential community immediately upstream. The backwater effect of the logjam interferes with the operation of the septic systems of the homeowners, which results in repair costs and the potential for raw sewage to spill into the river.

The National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190) requires all Federal agencies to address the environmental impacts of any major Federal action on the natural and human environment. Guidance for complying with the NEPA is contained in Title 40 of the Code of Federal Regulations (CFR), Parts 1500 through 1508, and in Engineering Regulation (ER) 200-2-2, *Procedures for Implementing NEPA*. The primary intent of NEPA is to ensure that environmental information is made available to public officials and citizens regarding major actions taken by Federal agencies. This environmental assessment was developed to assure that construction of the proposed project complies with the intent of NEPA.

SECTION 2.0 ALTERNATIVES

Alternatives include a No Action plan, which would retain existing conditions; and a Proposed Action plan, which would remove the logjam.

2.1 No Action

The Council on Environmental Quality (CEQ) regulations implementing the provisions of the National Environmental Policy Act of 1969 (NEPA) require Federal agencies to consider a "no action" alternative. These regulations define the "no action" alternative as the continuation of existing conditions and their effects on the environment, without implementation of, or in lieu of, a proposed action. This alternative represents the existing condition and serves as the baseline against which to compare the effects of the proposed alternative. The no action alternative would retain the existing condition and would not result in any project-related environmental impacts or loss of habitat.

Under the existing conditions the logjam will continue to increase in size as more debris accumulates. During high flow events the homes surrounding Blackwell Lake will experience greater flood damage as the lake level rises. Damages will consist of structure flooding, damage to septic systems, and erosion. Septic system flooding would continue to pose a significant public health hazard through contamination of Blackwell Lake, which serves as a backup water supply for the City of Blackwell, Oklahoma.

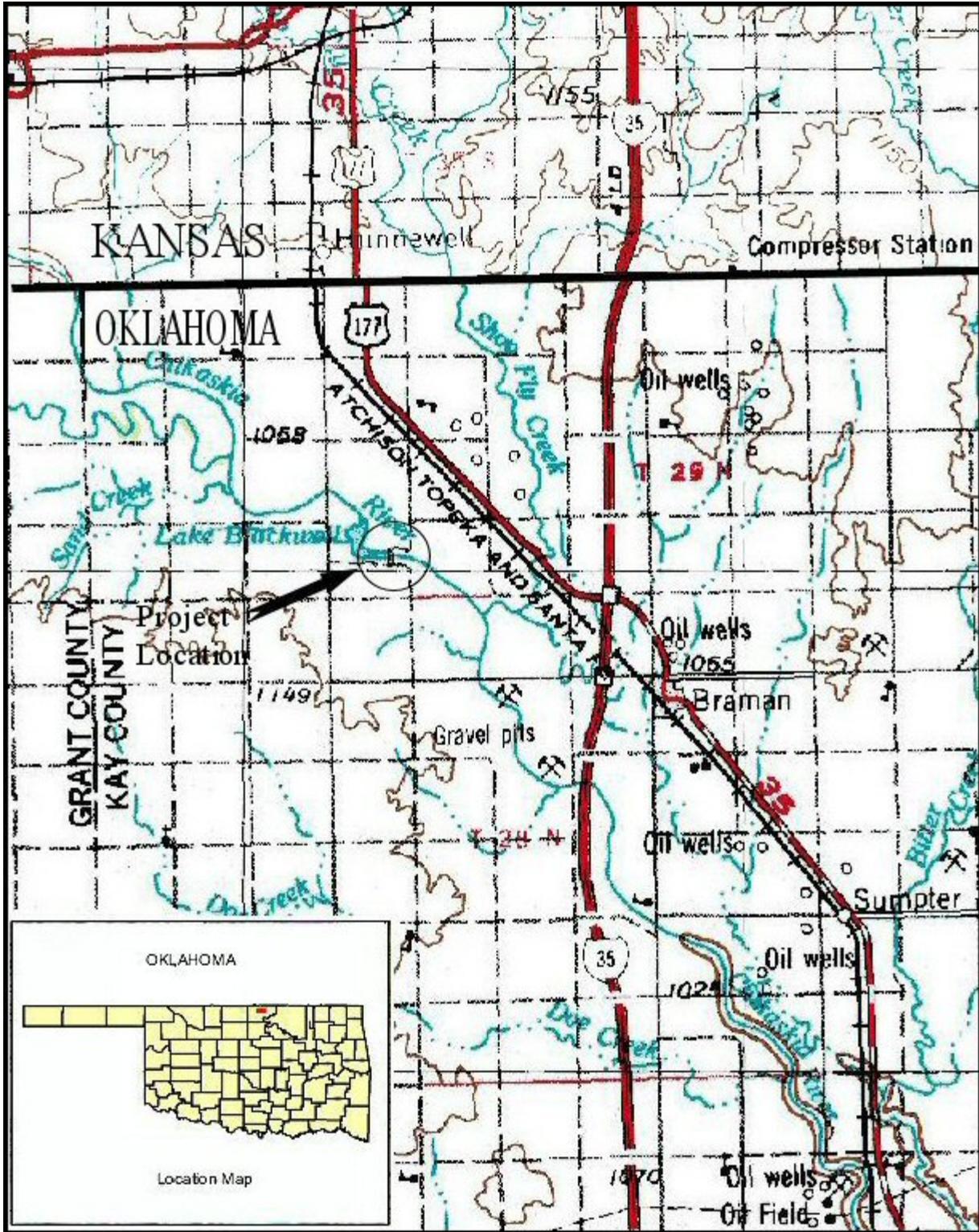


Figure 1.0 Vicinity Map, Blackwell Lake Clearing and Snagging Project, Kay County, Oklahoma.



Photo 1.0 Blackwell Lake Dam.



Photo 1.1. Log jam at Blackwell Lake Dam.

2.2 Action Alternatives

Alternatives to the No Action Plan are limited. This is a clearing and snagging project designed to remove the debris, which would allow the Authority to resume general operations and maintenance activities at the project. Any action alternative would have to include removal of the logjam. The volume of the debris pile was estimated from aerial photos and measurements taken during site visits. The alternative costs are based on a volume of 27,800 cubic yards.

Several methods of removing the debris were considered. Plan formulation included alternatives that would allow the sponsor credit for in-kind services to reduce the amount of money required from the sponsor. Because of the size of the logjam only a portion can be reached from shore so it is outside the maintenance capability of the Authority. Attempting to anchor a cable to the individual logs and drag them to shore was deemed too dangerous and was dropped as an alternative.

Alternative methods of debris removal that were considered include:

1. Contractor with marine based equipment would remove the debris and place it in the disposal area.
2. Contractor with marine based equipment would remove the debris and place it on the shore. Sponsor would move the debris to the disposal area.

3. Marine based equipment would be rented and a crew hired to remove the debris and place it in the disposal area.
4. Contractor would utilize an inflatable cofferdam around the logjam to dewater it and remove the debris with a dragline and track hoe.
5. Contractor would construct a temporary earthen cofferdam around the logjam to dewater it and would remove the debris to the disposal area.
6. Contractor would construct a temporary earthen cofferdam around the logjam to dewater it. The Sponsor would remove the debris and place it in the disposal area. Contractor would return and remove cofferdam.
7. Cables would be attached to the debris from a pontoon boat and the debris dragged to shore.
8. Construct an earthen cofferdam to dewater the debris pile and burn it in place. Remove the ashes.

2.3 Final Alternatives

Screening level costs were developed for alternatives 1, 3, 4, 5, and 6. Alternative 3 was dropped from this group because it had a significantly higher cost than alternatives 1, 4, 5, and 6. A summary of the benefits and costs for alternatives 1, 4, 5, and 6 is shown in Table 2.3. Alternative 2 was not included in the cost effective analysis because it was questionable that the sponsor would be able to move debris fast enough not to impede the contractor. Alternative 7 was dropped because of safety concerns with attaching cables or dragline to the log from a boat. Alternative 8 was dropped because heat from the burning debris could damage the concrete dam. Alternative 1 is the recommended plan and is addressed in Section 3.0.

	Alternative 1	Alternative 4	Alternative 5	Alternative 6
Plans and Specifications	\$40,000	\$40,000	\$40,000	\$40,000
LERRD ¹	4,000	4,000	4,000	4,000
Construction	434,200	435,700	536,800	520,700
Subtotal	478,200	479,700	580,800	564,700
Contingency	48,000	49,000	59,000	57,000
Total Implementation Cost	526,200	528,700	639,800	621,700
Annual Interest Rate	5-3/8%	5-3/8%	5-3/8%	5-3/8%
Period of Analysis	50 years	50 years	50 years	50 years
Interest and Amortization	30,509	30,654	37,096	36,046
Operation & Maintenance ²	0	0	0	0
Annual Cost	30,509	30,654	37,096	36,046
Annual Benefits	39,600	39,600	39,600	39,600
Benefit-to-Cost Ratio	1.3	1.29	1.07	1.10
Net Annual Benefits	9,091	8,946	2,504	3,554
¹ Lands, Easements, Rights-of-Way, Relocations, and Disposal areas.				
² There are no additional O&M costs related to the project.				

Table 2.3 Summary of Benefits and Costs.

SECTION 3.0 PROPOSED ACTION

Alternative 1 has the lowest cost and highest net benefits and is the recommended plan. It calls for a contractor with marine based equipment to remove the debris and place it in the disposal area. Debris would be moved to shore using a barge based crane and then moved to the disposal site in dump trucks.

The project area is located on land owned by the Lake Blackwell Trust Authority. The area set aside for debris disposal is immediately downstream of the dam on the south side of the Chikaskia River (Figure 3.0). It is approximately 4.5 acres and is also owned by the Sponsor. A construction easement of 0.5 acre would also be required. Credit to the Sponsor for Lands, Easements, Rights-of-Way, Relocations, and Disposal areas (LERRD) is estimated at \$4,000.

The total cost of the recommended plan will be shared between the Government and the Sponsor on a 65%/35% proportion. The 35% apportionment to the Sponsor is comprised of a cash contribution equal to a minimum 5% of the total project cost in cash plus a credit for the value of any lands, easements, rights-of-way, relocations, and disposal areas required for the project. In the event the sum of the 5% cash contribution and the LERRD credit does not equal at least 35% of the total project cost, an additional cash contribution will be required such that the 35% proportion is reached.

Annual operation, maintenance, repair, rehabilitation, and replacement (OMRR&R) for this project are considered to be \$0. There are no requirements beyond the OMRR&R currently performed by the Sponsor. The Sponsor currently inspects the dam and removes debris. The existing problem is the result of recent damaging ice storms that damaged or killed an unusually large number of trees and caused a surge of debris to enter the Chikaskia River. The great amount of debris overwhelmed the removal capability of the Sponsor.

This plan was selected because it would have a benefit/cost ratio of 1.30, is expected to provide net annual benefits of \$9,091, and meets the benefit/cost requirement for Federal interest. It would allow the Authority to regain O&M capability of the dam and would reduce potential flooding of adjacent structures. It would reduce a public health hazard created by septic system overflow into a public water supply, and would protect against potential future loss of the dam. The Lake Blackwell Trust Authority supports this plan.

SECTION 4.0 AFFECTED ENVIRONMENT

Lake Blackwell is located in Kay County in north central Oklahoma about 3 ½ miles northwest of Braman, Oklahoma.

Kay County is part of the Central Great Plains, encompassing some of the best agricultural land in Oklahoma. Average annual precipitation ranges from about 35 inches in western Kay County to 39 inches in the east. May and June are the wettest months, on average, but much of the spring through fall receives sufficient rainfall. Nearly every winter has at least one inch of snow, with one year in three having ten or more inches.

Temperatures average near 59 degrees, with a slight increase from north to south. Temperatures range from an average daytime high of 93 degrees in July to an average low of 23 degrees in January. Kay County averages a growing season of 196 days, but plants that can withstand short periods of colder temperatures may have an additional six weeks.

Winds across from the south to southeast are quite dominant, averaging just over nine miles-per-hour. Relative humidity, on average, ranges from 46% to 90% during the day. During the year, humidity is highest in December and lowest in August. Winter months tend to be cloudier than summer months. The percentage of possible sunshine ranges from an average of about 55% in winter to nearly 80% in summer. Thunderstorms occur on about 52 days each year, predominantly in the spring and summer. During the period 1950 - 2003, Kay County recorded 87 tornadoes. The most recent significant tornado (F2 intensity or greater) occurred on June 8, 1993, passing nearly harmlessly on a 12-mile path near Newkirk. Kay County was hit by an F5 tornado on May 25, 1955. That tornado ranks among the deadliest in Oklahoma history. Typically, there are about 4 events each year of hail

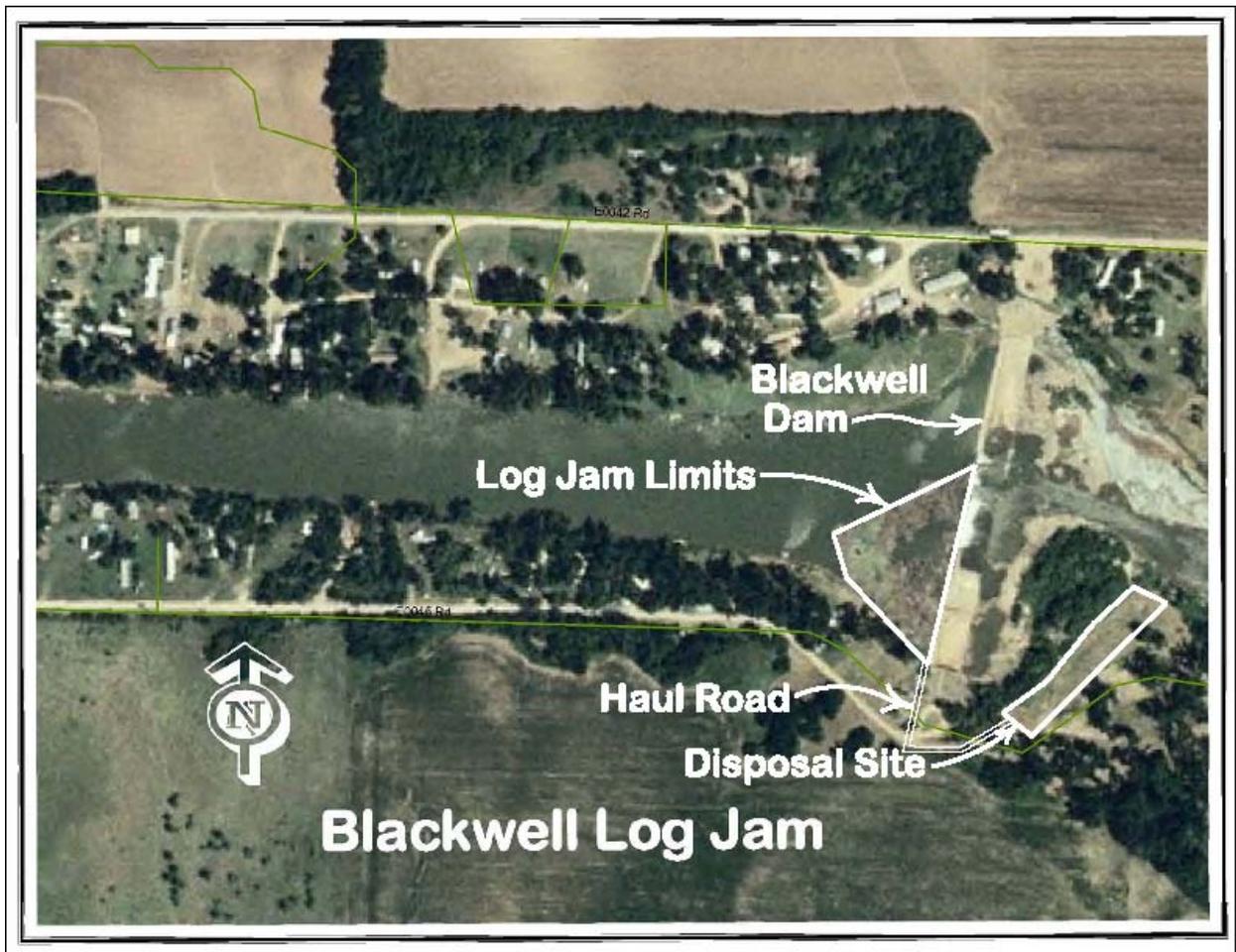


Figure 3.0 Disposal Area.

exceeding one inch in diameter. As information collection improves, both the number of reported tornadoes and the number of severe hail events have increased.

4.1 Social and Economic Conditions

The proposed project would have a direct impact on persons living and working along the Chikaskia River near the town of Braman, OK in Kay County. This area is considered the social area within which the primary impacts of the proposed project would occur.

The U.S. Census Bureau estimated that the town of Braman had a population of 244 in 2000, which is a 3% decrease over the 1990 population of 251. Kay County had a population of 48,080 in the year 2000, a .05% increase above the 1990 Census count. The State of Oklahoma posted a population increase of 9.7% during the same period. According to the 2000 Census, the median resident age for the town of Braman was 38.6 years. Hispanic or Latino people comprised 5% of the total population with American Indian/Alaska Native making up 6.7%.

In 2000, there were 68% of the residents in the labor force in the town of Braman, of which only 2.1% were unemployed. The State of Oklahoma unemployment rate was 3.3% during the same year. The majority of the employees in the area worked in retail trade, educational, health, and social services sectors. Educational, health, and social services sectors provided 26.4% of the employment for Braman.

The social area is primarily residential, with an additional mix of industrial, commercial and agricultural operations. The area of impact mainly consists of residential structures, most of which serve as vacation homes or homes that have a median house value above that of the town of Braman. The 2000 per capita income (PCI) for residents in Braman was \$17,721. This compared with \$17,646 PCI for the State of Oklahoma and \$21,587 for the entire United States.

4.2 Executive Order 12898

Executive Order 12898 requires each Federal agency to make environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

Under NEPA, the identification of a disproportionately high and adverse human health or environmental effect on a low-income population, minority population, or Indian tribe does not preclude a proposed agency action from going forward, nor does it necessarily compel a conclusion that a proposed action is environmentally unsatisfactory. Rather, the identification of such an effect serves to heighten agency attention to alternatives (including alternative sites), mitigation strategies, monitoring needs, and preferences expressed by the affected community or population.

Low-income populations in an affected area are identified with the annual statistical poverty thresholds from the Bureau of the Census Reports on Income and Poverty. In identifying low-income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect.

Minorities are comprised of individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.

Minority populations are identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. In identifying minority communities, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a geographically dispersed/transient set of individuals (such as migrant workers or Native American), where either type of group experiences common conditions of environmental exposure or effect. The selection of the appropriate unit of geographic analysis may be a governing body's jurisdiction, a neighborhood, census tract, or other similar unit that is to be chosen so as to not artificially dilute or inflate the affected minority population. A minority population also exists if there is more than one minority group present and the minority percentage, as calculated by aggregating all minority persons, meets one of the above-stated thresholds.

Disproportionately high and adverse human health effects: When determining whether human health effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable: (a) Whether the health effects, which may be measured in risks and rates, are significant or above generally accepted norms. Adverse health effects may include bodily impairment, infirmity, illness, or death; and (b) Whether the risk or rate of hazard exposure by a minority population, low-income population, or Indian tribe to an environmental hazard is significant and appreciably exceeds or is likely to appreciably exceed the risk or rate to the general population or other appropriate comparison group; and (c) Whether health effects occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.

Disproportionately high and adverse environmental effects: When determining whether environmental effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable: (a) Whether there is or will be an impact on the natural or physical environment that significantly and adversely affects a minority population, low-income population, or Indian tribe. Such effects may include ecological, cultural, human health, economic, or social impacts on minority communities, low-income communities, or Indian tribes when those impacts are interrelated to impacts on the natural or physical environment; and (b) Whether environmental effects are significant and are or may be having an adverse impact on minority populations,

low income populations, or Indian tribes that appreciably exceeds or is likely to appreciably exceed those on the general population or other appropriate comparison group; and (c) Whether the environmental effects occur or would occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.

4.3 Executive Order 13045

On 21 April 1997, President Clinton issued Executive Order 13045 (EO 13045), Protection of Children From Environmental Health Risks and Safety Risks, which notes that children often suffer disproportionately from environmental health and safety risks, due in part to a child's size and maturing bodily systems. The executive order defines environmental health and safety risks as risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breath, the food we eat, the water we drink or use for recreation, the soil we live on, and the products we use or are exposed to). Executive Order 13045 requires Federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that may affect children disproportionately. The Order further requires Federal agencies to ensure that its policies, programs, activities, and standards address these disproportionate risks. Executive Order 13045 is addressed in this NEPA document to examine the effects this action will have on children.

4.4 Natural Resources

4.4.1 Terrestrial

Kay County lies within the Prairie Tableland ecoregion of the Central Great Plains. This ecoregion is nearly level, dominated by cropland, and underlain by Permian red shale, soft sandstone, and siltstone. Kay County is one of the leading agricultural counties in Oklahoma. Natural vegetation is mixed grass prairie. The county is treeless except for narrow strips along streams and in some places on uplands adjacent to the stream bottoms.

The predominant land use in the project area is agricultural. Much of the land is in cropland. Wheat is the predominant agricultural crop followed by grain sorghum and soybeans. Corn and oats are also important field crops in the County.

Mixed grass prairie is considered a combination of short and tallgrass prairie and contains more plant species than any other prairie type. Both short and tallgrass plant species are here. Whereas grasses of a uniform height blanket tallgrass prairies, mixed prairies are more open and feature grasses and plants of different heights. Little bluestem (*Schizachyrium scoparium*) is the dominant grass in mixed grass prairie. Other species characteristic of tallgrass prairies include big bluestem (*Andropogon gerardii*), Indian grass (*Sorghastrum nutans*), switchgrass (*Panicum virgatum*), buffalo pea (*Astragalus spp.*), purple prairie clover (*Dalea purpurea*), sunflowers (*Helianthus spp.*), goldenrod (*Solidago canadensis*), blazing star (*Liatris punctata*), prairie purple coneflower (*Echinacea angustifolia*), and aster (*Aster spp.*). Characteristic shortgrass prairie species include blue grama (*Bouteloua gracilis*), buffalograss (*Buchloe dactyloides*), red false mallow (*Sphaeralcea coccinea*), purple locoweed (*Oxytropis lambertii*), false indigo bush (*Amorpha fruticosa*), and prickly pear cactus (*Opuntia macrorhiza*). Trees scattered along the Chikaskia River include cottonwood (*Populus deltoides*), pecan (*Carya illinoensis*), sugarberry (*Celtis laevigata*), willow (*Salix nigra*), Chinaberry (*Sapindus drummondii*), and American elm (*Ulmus americana*).

4.4.2 Soils

Soils in the project area are of the Kaw-Brewer-Reinach-Lela Association. This soil association generally consists of the highly productive bottom lands along the rivers and other large streams in Kay County. They are deep, granular soils formed in recently deposited, dark-colored sediments. They have a clay subsoil but are moderately well drained. Four soil types occur at the proposed project. They include Breaks-Alluvial land complex (Bk), Port silt loam (Ps), Loamy broken land (Lo), and Port soils, frequently flooded (Pf). Port silt loam is classified as prime farmland.

Breaks-Alluvial land complex consists of land types in the prairie uplands at the bottoms and on the sides of drainageways. The slopes at the bottoms of the drainageways generally do not exceed 2 to 3 percent, but the side slopes and escarpments average about 10 percent and are steep in places. The narrow bottoms are frequently

flooded and contain dark-colored, loamy recent alluvium. The side slopes, or breaks, consist of loamy and clayey materials that range from clay loam to clay. The Breaks-Alluvial land complex experiences rapid runoff and frequent flooding and is susceptible to severe erosion. It is not suitable for cultivation and nearly all is used for pasture. This soil type is situated adjacent to the river beginning at the damsite extending upstream. Only a small area along the banks of the Chikaskia River adjacent to the dam would be impacted by this project.

Port silt loam soil occurs on 0 to 1 percent slopes. It is a deep soil on bottom lands and is highly valued for farming. It is easily tilled and is only slightly, if at all, damaged by flooding. Erosion is not likely because of the levelness of the soil. This soil is moderately permeable and has medium runoff and internal drainage. Nearly all this soil is cultivated and it is classified as prime farmland. Only a small area of this soil type would be needed as a haul road and it is on previously disturbed soil.

Loamy broken land consists of narrow bands of sloping to steep broken slopes that separate bottom lands from the adjoining uplands. The slopes range from 5 to as much as 50 percent, but they average about 12 percent. The surface layer ranges from loam to silt loam in texture and from brown to dark brown in color. Although the soil material is generally thick, the underlying limestone is close to the surface in some places. Limestone crops out in about 2 to 5 percent of the area on the steeper, more broken slopes. It is not suitable for cultivation. The haul road would cross only a few feet of this soil type.

Port, frequently flooded soils, generally occupy long, narrow areas on low first bottoms adjacent to the Chikaskia River. They vary considerably from place to place and from time to time because new material is deposited by the frequent floods, which vary in intensity. The surface layer is mainly silt loam but is fine sandy loam and silty clay loam in some places. The profile of these soils is more stratified and generally is finer textured than the profile described for the Port series. In some areas strata of coarse sand occur below a depth of 3 feet. These frequently flooded soils are high in natural fertility. They are not well drained in the lower, more clayey spots such as in the project area. Because these soils are frequently flooded, yields are generally much lower than those on Port silt loam. If crops are not damaged by floods, yields are favorable. The disposal area is located on this soil type (Photo 4.4.2).



Photo 4.4.2 Habitat at the disposal site.

4.4.3 Prime Farmland

Soil that is prime or unique farmland as defined in the Farmland Protection Policy Act is classified as prime farmland. According to the U.S. Department of Agriculture, it is soil that is best suited for producing food, feed, forage, fiber, and oilseed crops. Port silt loam is classified as prime farmland. The predominant use in Kay County is for farm land. The area classified as Port silt loam within the immediate project area is located at the south end of the dam and has been previously disturbed by dam construction and by an old county road. This soil type would be crossed by a haul road from the logjam to the disposal area. The haul road would run parallel to the river between the existing road and the river on soil that has already been disturbed and is not suitable for farming.

4.4.4 Wild and Scenic Rivers

There are no streams within the project area that are classified as wild and scenic pursuant to the Federal Wild and Scenic Rivers Act, Public Law 90-542.

4.4.5 Aquatic and Wetlands

Blackwell Lake is confined within the banks of the Chikaskia River and does not spread out over substantial acreages, as do most lakes (Photo 4.4.5). It extends up the channel about five miles. The Chikaskia River is a perennial stream with a streambed composed primarily of sand and silt. Rock outcrops and areas of silt are plentiful in the streambed above the lake.

The project does not require the placement of dredge or fill material in regulated water so a permit pursuant to Section 404 of the Clean Water Act is not required (Appendix B).

4.4.6 Fish and Wildlife

Fishing is very popular at the site. Species frequently caught include black bullhead (*Ictalurus melas*), channel catfish (*Ictalurus punctatus*), and flathead catfish (*Pylodictis olivaris*). In Sumner County, Kansas, just upstream of the project, the Chikaskia River is considered a good fishery with high quality water.

Amphibians and reptiles that could occur in the project area include barred tiger salamander (*Ambystoma mavortium*), western narrow-mouthed toad (*Gastrophryne olivacea*), great plains toad (*Bufo cognatus*), plains spadefoot toad (*Spea bombifrons*), plains leopard frog (*Rana blairi*), spotted chorus frog (*Pseudacris clarki*), northern cricket frog (*Acris crepitans*), and bullfrog (*Rana catesbeiana*). Common species of reptiles that could occur in the project area include the common snapping turtle (*Chelydra serpentina*), northern painted turtle (*Chrysemys picta*), ornate box turtle (*Terrapene ornata*), earless lizard (*Holbrookia maculata*), Texas horned lizard (*Phrynosoma cornutum*), six-lined racerunner (*Cnemidophorus sexlineatus*), eastern racer (*Coluber constrictor*), western hognosed snake (*Heterodon nasicus*), ringneck snake (*Diadophis punctatus*), bull snake (*Pituophis melanoleucus*), prairie kingsnake (*Lampropeltis calligaster*), coachwhip (*Masticophis flagellum*), diamondback water snake (*Nerodia rhombifera*), and common garter snake (*Thamnophis sirtalis*).

Birds that are most likely to occur in the area include mourning dove, bobwhite quail, great horned owl, barred owl, red-tailed hawk, wood duck, redheaded woodpecker, hairy woodpecker, downy woodpecker, great blue heron, blue jay, Carolina chickadee, European starling, English sparrow, warblers, flycatchers, native sparrows, red-winged blackbird, brown-headed cowbird, and cardinal. Neotropical migrants utilize the bottomland forests along the river during spring migration.

Mammals most likely to occur in the project area include species typically found along wooded streams in a prairie environment. These include fox squirrel (*Sciurus niger*), pocket gopher (*Geomys bursarius*), raccoon (*Procyon lotor*), opossum (*Didelphis marsupialis*), mink (*Mustela vison*), striped skunk (*Mephitis mephitis*), spotted skunk (*Spilogale putorius*), coyote (*Canis latrans*), cottontail rabbit (*Sylvilagus floridanus*), whitetail deer (*Odocoileus virginianus*), several species of rodents, and several species of bats.



Photo 4.4.5 Lake is confined within the channel.

4.4.7 Executive Order 13112

On 3 February 1999, President Clinton issued Executive Order 13112 (EO 13112), Invasive Species, which notes that invasive species annually cause significant economic, ecological, and human health impacts in the United States. The executive order defines invasive species as an alien species whose introduction does or is likely to cause economic and environmental harm or harm to human health. Executive Order 13112 requires Federal agencies to not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States; and that all feasible and prudent measures to minimize risk or harm will be taken in conjunction with the actions. Executive Order 13112 is addressed in this NEPA document to incorporate measures that will prevent the inadvertent spread of exotic and invasive species. These preventative measures are described in Section 6.0, Restoration Plan.

4.5 Threatened and Endangered Species

Threatened and endangered species listed for Kay County, Oklahoma includes the bald eagle, interior least tern, and piping plover.

Bald eagles utilize large trees near water with abundant fish for perching and for nesting. Large cottonwoods do occur in the project area along the banks of the Chikaskia.

Interior least terns utilize sandbars and islands along large rivers for nesting. The project area doesn't contain suitable habitat for nesting interior least terns.

Piping plovers utilize sandbar and island habitat similar to that used by interior least terns for nesting. They will also nest on pebbly mud flats. The project area doesn't contain suitable habitat for nesting piping plovers.

4.6 Cultural Resources

In accordance with Section 106 of the National Historic Preservation Act of 1966 (as amended), in February 2006 consultation was initiated with the Oklahoma State Historic Preservation Office (SHPO) and the Oklahoma Archeological Survey (OAS). Additionally, appropriate Native American tribes were contacted, including the Cherokee Nation of Oklahoma; the Kaw Nation of Oklahoma; the Osage Nation of Oklahoma; the Otoe-Missouria Tribe of Indians of Oklahoma; the Pawnee Nation of Oklahoma; the Ponca Tribe of Indians of Oklahoma; the Tonkawa Tribe of Indians of Oklahoma; and the Wichita and Affiliated Tribes of Oklahoma (see Appendix D). None of the tribes provided comments on the project.

In letters dated February 22, 2006 to the SHPO and OAS, Tulsa District requested comment on a determination of "no historic properties affected" for the Blackwell Lake project. This determination was made because of several factors, including (1) use of marine-based equipment to load debris onto the shore; (2) transport of debris over existing roads for a short distance to the disposal site; and (3) off-loading at the disposal site without any significant ground disturbance. In letters dated February 27, 2006 and March 17, 2006, respectively, OAS and SHPO agreed with Tulsa District's determination of "no historic properties affected". Section 106 coordination is therefore complete for this project.

4.7 Water Quality

Although the Chikaskia River meanders from the northwest, the dam site is only 3 ½ miles due south of Sumner County, Kansas. Most of the drainage basin for the Chikaskia River above the dam site is in Kansas. The Kansas Department of Environmental Quality lists the surface water quality to be generally in fair to good condition. The primary pollutant concern within the drainage is fecal coliform bacteria. Fecal coliform bacteria are found in the digestive systems of warm-blooded animals. In the streams, coliform bacteria are an indicator of potential disease producing organisms. Additional pollutants in the Chikaskia include selenium, turbidity, low dissolved oxygen, and ammonia.

Water quality in the Chikaskia River is based on surrounding land uses. The predominant land use in the basin is agriculture with livestock being the main agricultural use and row crops being second. Confined animal feeding operations (feedlots), open range livestock, septic systems, and row crop agriculture are the primary pollutant sources. Feedlots and unconfined livestock operations contribute a significant source of fecal coliform bacteria and nutrients. Septic systems can provide a source of fecal coliform bacteria if not properly maintained. Common pollutants from row crop agriculture include sediment, nutrients, pesticides, nitrates, ammonia, suspended solids, and volatile organic compounds.

The lowlands of the lower portion of the river are largely cultivated, so this portion of the river is usually more turbid than the smaller streams of the upper watershed. Potential limiting factors associated with the Chikaskia River are low flows, silt, turbidity, feedlots, grazing lands, crop sprays, and channelized sections.

4.8 Air Quality

The U.S. Environmental Protection Agency (EPA) published a Conformity Rule on November 30, 1993, requiring all Federal actions to conform to appropriate State Implementation Plans (SIP's) that were established to improve ambient air quality. At this time, the Conformity Rule only applies to Federal actions in non-attainment areas. A non-attainment area is an area that does not meet one or more of the National Ambient Air Quality Standards for the criteria pollutants designated in the Clean Air Act (CAA).

Blackwell Lake is near the town of Braman in rural north central Oklahoma about 20 miles northwest of Ponca City, Oklahoma. The Oklahoma Department of Environmental Quality has an air quality monitor in Ponca City that monitors for sulfur dioxide and particulate matter. National Ambient Air Quality Standards exist for six pollutants: carbon monoxide, ozone, particulate matter smaller than 10µm, sulfur dioxide, nitrogen oxides, and lead.

These "criteria pollutants" are the only ones for which standards have been established. The EPA assigns designations, based on an area's meeting, or "attaining" these standards. The Braman-Kay County area is designated "In Attainment" for criteria pollutants and air toxins.

A conformity determination based on air emission analysis is required for each proposed Federal action within a non-attainment area. Since this geographical region is in attainment and meets the National Air Quality Standards for the criteria pollutants designated in the CAA, a conformity determination is not required.

4.9 Hazardous, Toxic, and Radiological Waste

Potential for discovery of hazardous material during removal of the logjam was evaluated through examination of historic and current land use, review of environmental databases, and visual observations. Avoidance of HTRW during construction is desirable in order to minimize project delays, remediation costs, and environmental damage.

Lands in the project area are primarily composed of agricultural land. As such, these lands have not been subject to industrial development or other land use activities with associated potential for significant contamination. In addition, lands in close proximity to the project area share similar land uses and has a low potential for contaminant transport to the project. Accordingly, there is no reason to believe that environmental media in the project area have been significantly contaminated by past or current land practices or by releases from adjoining properties. No hazardous, toxic, or radiological waste was observed, and potential for encountering these materials does not appear likely.

A search of environmental databases revealed no documented areas of contamination near the project location. A search of the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database revealed the presence of nine CERCLIS-listed sites in Kay County, Oklahoma. However, all are located over ten miles from the proposed project. Three sites listed on the Enforcement and Compliance History Online (ECHO) database were noted in Kay County. Of these three sites, none are located near the Blackwell Lake area. Based on this information from environmental databases and documents there is a low probability of HTRW related problems from documented areas of local contamination.

Finally, a site visit was conducted on September 8, 2005 that included a search for visual evidence of potential HTRW-related problems. This involved walking the project area as well as visual reconnaissance of surrounding areas. Areas of soil staining, evidence of unusual vegetative distress, drums of containerized waste, unusual topography (mounds or depressions), or other visual evidence of potential contamination were not noted at any location within the proposed project area.

SECTION 5.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

A summary of environmental impacts is presented in Table 5.0, Impact Assessment Matrix.

5.1 Social and Economic Impacts

5.1.1 Future Without-Project Conditions

Under the without-project conditions, population trends of the past decade would likely continue. Job opportunities in Braman and the demand for residential lands will be linked to future population dynamics in the area. The logjam will continue to increase in size as more debris accumulates. During high flow events, the homes surrounding Blackwell Lake will experience more flood damages, as the lake level raises. Damages will consist of structure flooding, damage to septic systems and erosion. Eventually, the river may flank the dam. The health and safety of these individuals would be at greater risk with the increased potential for flooding.

**Table 5.0
Impact Assessment Matrix**

Name of Parameter	Magnitude of Probable Impact						
	Increasing Beneficial Impact			No Appreciable Effect	Increasing Adverse Impact		
	Significant	Substantial	Minor		Minor	Substantial	Significant
A. Social Effects							
1. Noise Levels				x			
2. Aesthetic Values			x				
3. Recreational Opportunities			x				
4. Transportation				x			
5. Public Health and Safety			x				
6. Community Cohesion (Sense of Unity)				x			
7. Community Growth and Development				x			
8. Business and Home Relocations				x			
9. Existing/Potential Land Use			x				
10. Controversy				x			
B. Economic Effects							
1. Property Values			x				
2. Tax Revenues				x			
3. Public Facilities and Services				x			
4. Regional Growth				x			
5. Employment				x			
6. Business Activity				x			
7. Farmland/Food Supply				x			
8. Flooding Effects				x			
C. Natural Resource Effects							
1. Air Quality				x			
2. Terrestrial Habitat				x			
3. Wetlands				x			
4. Aquatic Habitat			x				
5. Habitat Diversity and Interspersion				x			
6. Biological Productivity			x				
7. Surface Water Quality			x				
8. Water Supply			x				
9. Groundwater				x			
10. Soils				x			
11. Threatened and Endangered Species				x			
D. Cultural Resources Effects							
1. Historic Architectural Values				x			
2. Pre-Historic & Historic Archeological Values				x			

The unemployment rate may increase to higher than the state level. Retail trade and education, health, and social services would remain an important part of the industrial segment of the economy. The logjam would continue to pose a threat to the residents living along the Chikaskia River where the problem has occurred. Given that the town of Braman is 3 ½ miles away from the logjam, other residents living in town will be unaffected by the presence of the logjam.

Income of persons living along Chikaskia River is expected to decrease if a flood were to occur due to the presence of the logjam. Eventually, flood damages, such as erosion and septic system damage would continue to impose a safety hazard on those living and working in the area. The additional costs associated with upgrade, repair, and maintenance of the dam would result in higher taxes and reduced disposable income. As employment opportunities remain lower along the Chikaskia River than in the town of Braman, the income of residents living near the logjam will not likely be tied to employment in the affected area. However, the income is associated with employment near the logjam. As well, property values would stabilize at lower levels if damage to the residential structures from flooding does occur.

Land use for the affected area along the river will continue to be a mixture of low to middle-high income residential properties, commercial development, and light industrial lands. The median house value in the Braman area in 2000 was \$118,300. However, the median value of homes in the immediate affected area is valued at more than the median value of homes in the town of Braman.

5.1.2 Future With-Project Conditions

The clearing and snagging of the logs at the dam-site will have a positive impact on the number of people living in the study area. Population trends of the past decade will continue.

Logjam removal will decrease the risk of flooding, erosion, and septic system damage to the inhabitants living along the Chikaskia River near the project area. Long-term impacts could include an increase in real estate along the river and less erosion problems. The overall aggregate employment rate of the Braman area would not be significantly affected. Logjam removal would not affect short-term nor long-term related employment, due to the fact that in-kind services are not being credited to the sponsor.

Although land use for the Braman area would continue to be a mixture of residential, commercial, industrial, and agricultural, the quality of urban growth will be unaffected by the logjam. Demand for new residential developments would increase the transition of developable lands out of the Braman area and into residential areas around the Chikaskia River. The safety of area residents residing near the dam would be maintained by guarding against another logjam.

5.2 Executive Order 12898

Removal of the logjam would have a positive economic and health effect on minorities and low-income populations.

5.3 Executive Order 13045

Removal of the logjam would have a positive effect on children's health and safety.

5.4 Natural Resource Impacts

5.4.1 Terrestrial

The proposed project would not result in the loss of any significant habitat or cause any significant adverse effects on the natural environment. Debris will be removed from the upstream side of the dam and transported immediately downstream of the dam for disposal. No trees or shrubs would be removed by the project. Removal of the logjam will protect the integrity of the dam.

5.4.2 Prime Farmland

There would be no impact on prime farmland. The haul road and disposal area are on soils that have been previously disturbed.

5.4.3 Aquatic and Wetlands

There would be a positive impact on aquatic habitat. A significant pollution problem occurs during high flows. Water from the Chikaskia River backs up behind the logjam and floods homes and septic systems thus releasing sewage and contaminants into the river. Removal of the logjam would allow for better flow over the dam during high flow conditions, which would reduce the frequency of flooding of these homes and their associated septic systems.

5.4.4 Wildlife

Temporary disturbance would occur during removal of the logjam but the disturbance would be minor and short term.

5.4.5 Wetlands and Water Quality Permits

The project does not involve the placement of dredge or fill material into regulated waters of the United States so a Department of the Army permit pursuant to Section 404 of the Clean Water Act is not required (Appendix B).

5.4.6 Executive Order 13112

Several species of exotic or invasive plants and animals have the potential to be transported into or out of the construction area by the equipment to be used by the contractor. Executive Order 13112 requires Federal agencies to not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States; and that all feasible and prudent measures to minimize risk or harm will be taken in conjunction with the actions. The potential exists at this project for the transport of species covered under this Executive Order. Section 6.0 addresses actions that will be taken by the contractor to prevent the inadvertent spread of exotic and invasive species at the Blackwell Lake project area.

5.5 Threatened and Endangered Species

Three species occur in Kay County that are listed as threatened or endangered by the U.S. Fish and Wildlife Service. These are bald eagle, interior least tern, and piping plover.

Several large trees occur in the vicinity of the project that could be utilized by the bald eagle for perching. These trees would not be removed. The project area is small and disturbance during removal of the logjam would be limited to the vicinity of the dam. Consequently, there would be no affect on the bald eagle.

The interior least tern and the piping plover would not be affected by the project since there is no suitable nesting habitat in the vicinity of the dam. No other Federally listed threatened or endangered species would be affected by the proposed project.

5.6 Cultural Resources

As outlined in Section 4.6 of this report, Section 106 coordination (National Historic Preservation Act of 1966, as amended) is complete. The proposed project will have no effect on historic properties.

5.7 Water Quality

Water quality at the dam would be affected during removal of the logjam because of the increase in turbidity. After completion of the project the water quality in Blackwell Lake should be improved because of the reduced

potential for flooding of homes and septic systems and the corresponding potential for contaminant release. The proposed project should not have an affect on the quality of groundwater.

5.8 Air Quality

Construction activity would have a minor temporary impact on air quality caused by heavy equipment operation and from fugitive dust (particulate) emissions in and around the project site. Contractors will comply with all appropriate Federal air quality regulations to limit the dispersal of particulate matter. A temporary increase in exhaust emissions would be expected during the project.

5.9 Hazardous, Toxic, and Radiological Waste

Based on the findings of the HTRW survey discussed in Section 4.8, the potential for discovery and significant problems related to HTRW during project construction or operation is believed to be low.

5.10 Noise

There would be an increase in noise from heavy equipment during the project, but this would be temporary and last only during the removal of the construction period.

5.11 Cumulative Impacts

No cumulative impacts are anticipated to occur as a result of the proposed project.

SECTION 6.0 RESTORATION PLAN

The debris removed from the river will be placed in the disposal area which is owned by the Trust Authority. There currently are no plans to further dispose or reduce the debris at the disposal site, although some of the debris may be used to fuel bonfires used in local celebrations.

The area adjacent to the logjam that will be disturbed by heavy equipment during removal of the logjam will be restored to pre-existing conditions to reduce the possibility of erosion. No other restoration is planned.

The introduction and spread of exotic and invasive species is a major concern with the use of heavy equipment for this project. Therefore, the contract specifications for this project will include the following condition. All equipment brought on site will be thoroughly washed to remove dirt, seeds, and plant parts. Any equipment that has been in any body of water within 30 days of its arrival at the work site will be thoroughly cleaned with hot water (hotter than 40° C or 104°F) and dried for a minimum of five days before being used at this project site. In addition, before transporting equipment from the project site all visible mud, plants, and fish/animals will be removed, all water will be eliminated, and the equipment will be thoroughly cleaned. Anything that came in contact with the water will be cleaned and dried following the above procedure.

SECTION 7.0 FEDERAL, STATE, AND LOCAL AGENCY COORDINATION

The draft environmental assessment (EA) was coordinated with the following agencies having legislative and administrative responsibilities for environmental protection. A copy of the correspondence from the agencies that provided comments and planning assistance for preparation of the draft EA are in the appendices. The mailing list for the 30-day public review period for this EA is in Appendix A.

U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service
Natural Resources Conservation Service
Oklahoma Department of Environmental Quality

Oklahoma Water Resources Board
Oklahoma Department of Wildlife Conservation
Oklahoma Historical Society

SECTION 8.0 REFERENCES

Bailey, R.G. 1980. *Ecoregions of the United States*. Miscellaneous Publication No. 1391. USDA, Forest Service, Washington, DC.

FedStats. Website. www.fedstats.gov.

Soil Conservation Service. 1983. *Soil Survey Legends for Prime Farmland Soils, Oklahoma*. U.S. Department of Agriculture (USDA), Stillwater, Oklahoma. 185p.

Soil Conservation Service. 1967. *Soil Survey of Kay County, Oklahoma*. USDA, Stillwater, Oklahoma. 86p.

U.S. Bureau of Census. 2001. *2000 Census of Population and Housing, STF3*. www.census.gov/

Kansas Department of Agriculture. Division of Water Resources. Website. www.accesskansas.org/kda/dwr/

Kansas Department of Health & Environment. Bureau of Water. 2001. *Watershed Conditions Report For HUC 11060005, (CHIKASKIA)*. KDHE, Topeka, Kansas. 16p.

Greatplains.org, 2000. Great Plains International Data Network (GPIDN). *Atlas of the Great Plains*. Website. www.greatplains.org/resource/atlas

Oklahoma Biological Survey. Website. wwwobs.bio.ou.edu/

Oklahoma Climatological Survey. Website. www.ocs.ou.edu/

Oklahoma Geological Survey. Website. www.ogs.ou.edu/

U. S. Environmental Protection Agency. Western Ecology Division, Corvallis, OR. *Ecoregions of Oklahoma*. Website. www.epa.gov/wed/pages/ecoregions/ok_eco.htm

U. S. Environmental Protection Agency. Enforcement & Compliance History Online (ECHO). Website. www.epa.gov/echo/

U. S. Environmental Protection Agency. CERCLIS Database. Website. www.epa.gov/superfund/sites/cursites

SECTION 9.0 APPLICABLE ENVIRONMENTAL LAWS AND REGULATIONS

Table 9.0

Relationship of Plans to Environmental Protection Statutes and Other Environmental Requirements

Policies	Compliance of Alternatives
<u>Federal</u>	
Archeological and Historic Preservation Act, 1974, as amended, 16 U.S.C. 469, <u>et seq.</u>	All plans in full compliance
Clean Air Act, as amended, 42 U.S.C. 7609, <u>et seq.</u>	All plans in full compliance
Clean Water Act, 1977, as amended (Federal Water Pollution Control Act, 33 U.S.C. 1251, <u>et seq.</u>)	All plans in full compliance
Endangered Species Act, 1973, as amended, 16 U.S.C. 1531, <u>et seq.</u>	All plans in full compliance
Federal Water Project Recreation Act, as amended, 16 U.S.C. 460-1-12, <u>et seq.</u>	N/A
Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661, <u>et seq.</u>	All plans in full compliance
Land and Water Conservation Fund Act, 1965, as amended, 16 U.S.C. 4601, <u>et seq.</u>	All plans in full compliance
National Historic Preservation Act, 1966, as amended, 16 U.S.C. 470a, <u>et seq.</u>	All plans in full compliance
National Environmental Policy Act, as amended, 42 U.S.C. 4321, <u>et seq.</u>	All plans in full compliance
Native American Graves Protection and Repatriation Act, 1990, 25 U.S.C. 3001-13, <u>et seq.</u>	All plans in full compliance
Rivers and Harbors Act, 33 U.S.C. 401, <u>et seq.</u>	N/A
Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001, <u>et seq.</u>	N/A
Wild and Scenic Rivers Act, as amended, 16 U.S.C. 1271, <u>et seq.</u>	N/A
Water Resources Planning Act, 1965	N/A
Floodplain Management (E.O. 11988)	All plans in full compliance
Protection of Wetlands (E.O. 11990)	All plans in full compliance
Environmental Justice (E.O. 12898)	All plans in full compliance
Farmland Protection Policy Act, 7 U.S.C. 4201, <u>et seq.</u>	All plans in full compliance
Protection of Children From Environmental Health Risks and Safety Risks (E.O. 13045)	All plans in full compliance

Note: Full compliance - Having met all requirements of the statutes, Executive Orders, or other environmental requirements for the current stage of planning.

SECTION 10.0 LIST OF PREPARERS

This EA has been prepared to assess the impacts of a clearing and snagging project at the Blackwell Lake damsite at Blackwell Lake, Braman, Kay County, Oklahoma. The following personnel contributed to the preparation of this document.

Stephen L. Nolen - Chief, Environmental Analysis and Compliance Branch; Engineer; 18 years U.S. Army Engineer District, Tulsa.

Jerry C. Sturdy - Biologist; 3 years U.S. Fish and Wildlife Service; 8 years U.S. Army Garrison, Fort Chaffee, Arkansas; 24 years U.S. Army Engineer Districts, Tulsa and Fort Worth.

Kenneth L. Shingleton, Jr. - Archaeologist; 7 years U.S. Army Engineer District, St. Louis; 5 years U.S. Army Engineer District, Tulsa.

Shawneen O'Neill - General Engineer; 3 years U.S. Army Missile Command; Lead Planner, 11 years U.S. Army Engineer District, Tulsa

Elizabeth D. Bashaw - Student Economist; 3 years U.S. Army Engineer District, Tulsa

APPENDIX A

COORDINATION/CORRESPONDENCE

Mailing List for Blackwell Lake Clearing and Snagging Project Draft EA

U. S. Senator Jim Inhofe
1924 S. Utica, Suite 530
Tulsa, OK 74104-6511

U. S. Senator Tom Coburn
1800 South Baltimore, Suite 800
Tulsa, OK 74119

Congressman Frank Lucas
720 South Husband, Suite 7
Stillwater, OK 74075

Senator David F. Myers
2300 N. Lincoln Blvd., Rm. 514B
Oklahoma City, OK 73105

Senator J. Berry Harrison
2300 N. Lincoln Blvd., Rm. 417C
Oklahoma City, OK 73105

Representative Jim Newport
2300 N. Lincoln Blvd., Rm. 404
Oklahoma City, Ok 73105

Representative Dale DeWitt
2300 N. Lincoln Blvd., Rm 302-B
Oklahoma City, OK 73105

Mr. Chad Smith, Principal Chief
Cherokee Nation of Oklahoma
P. O. Box 1767
Tahlequah, OK 74465

Mr. Guy Munroe, Chairman
Kaw Nation
Drawer 50
Kaw City, OK 74641

Mr. Jim Gray, Principal Chief
Osage Nation
P. O. Box 779
Pawhuska, OK 74056

Mr. James E. Grant, Chairman
Otoe-Missouria Tribe of Indians, Oklahoma
8151 Highway 177
Red Rock, OK 74651

Mr. George E. Howell, President
Pawnee Nation of Oklahoma
P. O. Box 470
Pawnee, OK 74058

Mr. Dwight Buffalo Head, Chairman
Ponca Nation
20 White Eagle Drive
Ponca City, OK 74601

Mr. Carl Martin, President
Tonkawa Tribe of Indians of Oklahoma
1 Rush Buffalo Road
Tonkawa, OK 74653

Mr. Gary McAdams, President
Wichita and Affiliated Tribes (Keechi,
Waco, &Tawakonie), Oklahoma
P. O. Box 729
Anadarko, OK 73005

Mr. Richard E. Greene
Federal Region VI Administrator
Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, TX 75202

Mr. Steve Thompson
Executive Director
Oklahoma Department of Environmental Quality
P.O. Box 1677
Oklahoma City, OK 73101-1677

Dr. Robert L. Brooks
University of Oklahoma
Oklahoma Archeological Survey
111 E. Chesapeake
Norman, OK 73019-0575

Dr. Bob Blackburn
State Historic Preservation Officer
Oklahoma Historical Society
2704 Villa Prom, Shepherd Mall
Oklahoma City, OK 73107

Mr. Duane A. Smith, Executive Director
Oklahoma Water Resources Board
3800 N. Classen Blvd.
Oklahoma City, OK 73118

Mr. Darrel Dominick
State Conservationist
USDA NRCS
100 USDA, Suite 206
Stillwater, OK 74074-2655

Mr. Jerry Brabander
Field Supervisor
U.S. Fish & Wildlife Service
222 South Houston, Suite A
Tulsa, OK 74127

Mr. Greg D. Duffy, Director
Oklahoma Dept. of Wildlife Conservation.
P.O. Box 53465
Oklahoma City, OK 73105

Mr. Darold D. Hale, Chairman
Lake Blackwell Trust Authority
19705 Northside Rd
Braman, OK 74632

Ms. Sally Norris, City Manager
City of Blackwell
P. O. Box 350
Blackwell, OK 74631

Mr. Laile Wilson
County Commissioner, District 3
1814 W. Dewey
Blackwell, OK 74631

Ms. Karen Kincheloe, Librarian
Blackwell Public Library
123 W. Padon Ave.
Blackwell, OK 74631

Mr. Jim Randolph
905 W. Fredericksburg
Broken Arrow, OK 74011

Mr. Jerry Sturdy
10750 N. County Rd 4445
Stigler, OK 74462



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

April 19, 2005

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Richard E. Greene
Federal Region VI Administrator
Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, TX 75202

Dear Mr. Greene:

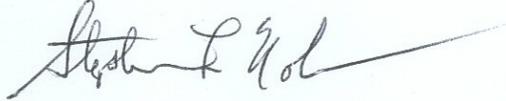
This is to inform you that the Tulsa District has been requested by the Lake Blackwell Trust Authority to study the feasibility of a clearing and snagging project to remove a logjam consisting of large trees and logs that has eliminated the ability to operate the flood gates at Lake Blackwell, Kay County, Oklahoma. Severe ice storms in 2001 resulted in higher than normal debris loads on the Chikaskia River, which has created a logjam that has exceeded the maintenance capability of the Authority. We are beginning the process of preparing an Environmental Assessment addressing the affect of various alternatives that would allow removal of the logjam. The study is being conducted under authority of Section 208 of the Flood Control Act of 1954, as amended. The Act provides authority to the US Army Corps of Engineers to plan and implement clearing and snagging projects to protect the integrity of flood control structures.

Backwater during high flow events causes several problems upstream of the dam including the potential flooding of approximately 200 structures and interference with the proper functioning of septic systems at residences, which creates the potential for raw sewage to spill into the Chikaskia River. Lake Blackwell also serves as a backup water supply for the City of Blackwell, Oklahoma. Alternatives will be considered that include options addressing removal of the logjam and a "no action" plan.

We are preparing documentation for compliance with the National Environmental Policy Act of 1969 and would appreciate comments from your agency concerning this proposed action.

If you have any questions or require additional information, please contact Mr. Jerry Sturdy at 918-669-4397.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen L. Nolen", with a long horizontal flourish extending to the right.

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

April 19, 2005

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Darrel Dominick
State Conservationist
USDA Agri-Center Bldg
100 USDA, Suite 206
Stillwater, OK 74074-2655

Dear Mr. Dominick:

This is to inform you that the Tulsa District has been requested by the Lake Blackwell Trust Authority to study the feasibility of a clearing and snagging project to remove a logjam consisting of large trees and logs that has eliminated the ability to operate the flood gates at Lake Blackwell, Kay County, Oklahoma. Severe ice storms in 2001 resulted in higher than normal debris loads on the Chikaskia River, which has created a logjam that has exceeded the maintenance capability of the Authority. We are beginning the process of preparing an Environmental Assessment addressing the affect of alternatives that would allow removal of the logjam. The study is being conducted under authority of Section 208 of the Flood Control Act of 1954, as amended. The Act provides authority to the US Army Corps of Engineers to plan and implement clearing and snagging projects to protect the integrity of flood control structures.

Backwater during high flow events causes several problems upstream of the dam including the potential flooding of approximately 200 structures and interference with the proper functioning of septic systems at residences, which creates the potential for raw sewage to spill into the Chikaskia River. Lake Blackwell also serves as a backup water supply for the City of Blackwell, Oklahoma. Alternatives will be considered that include options addressing removal of the logjam and a "no action" plan.

We are preparing documentation for compliance with the National Environmental Policy Act of 1969 and would appreciate comments from your agency concerning this proposed action.

-2-

If you have any questions or require additional information,
please contact Mr. Jerry Sturdy at 918-669-4397.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen L. Nolen", with a long horizontal flourish extending to the right.

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

April 19, 2005

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Jerry Brabander, Field Supervisor
U.S. Fish & Wildlife Service
222 South Houston, Suite A
Tulsa, OK 74127

Dear Mr. Brabander:

This is to inform you that the Tulsa District has been requested by the Lake Blackwell Trust Authority to study the feasibility of a clearing and snagging project to remove a logjam consisting of large trees and logs that has eliminated the ability to operate the flood gates at Lake Blackwell, Kay County, Oklahoma. Severe ice storms in 2001 resulted in higher than normal debris loads on the Chikaskia River, which has created a logjam that has exceeded the maintenance capability of the Authority. We are beginning the process of preparing an Environmental Assessment addressing the affect of alternatives that would allow removal of the logjam. The study is being conducted under authority of Section 208 of the Flood Control Act of 1954, as amended. The Act provides authority to the US Army Corps of Engineers to plan and implement clearing and snagging projects to protect the integrity of flood control structures.

Backwater during high flow events causes several problems upstream of the dam including the potential flooding of approximately 200 structures and interference with the proper functioning of septic systems at residences, which creates the potential for raw sewage to spill into the Chikaskia River. Lake Blackwell also serves as a backup water supply for the City of Blackwell, Oklahoma. Alternatives will be considered that include options addressing removal of the logjam and a "no action" plan.

We are preparing documentation for compliance with the National Environmental Policy Act of 1969 and would appreciate comments from your agency concerning this proposed action.

-2-

Your comments are requested in accordance with the Fish and Wildlife Coordination Act and the Endangered Species Act. If you have any questions or require additional information, please contact Mr. Jerry Sturdy at 918-669-4397.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen L. Nolen", with a long horizontal flourish extending to the right.

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

April 19, 2005

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Duane A. Smith
Executive Director
Oklahoma Water Resources Board
3800 North Classen Blvd.
Oklahoma City, OK 73118

Dear Mr. Smith:

This is to inform you that the Tulsa District has been requested by the Lake Blackwell Trust Authority to study the feasibility of a clearing and snagging project to remove a logjam consisting of large trees and logs that has eliminated the ability to operate the flood gates at Lake Blackwell, Kay County, Oklahoma. Severe ice storms in 2001 resulted in higher than normal debris loads on the Chikaskia River, which has created a logjam that has exceeded the maintenance capability of the Authority. We are beginning the process of preparing an Environmental Assessment addressing the affect of various alternatives that would allow removal of the logjam. The study is being conducted under authority of Section 208 of the Flood Control Act of 1954, as amended. The Act provides authority to the US Army Corps of Engineers to plan and implement clearing and snagging projects to protect the integrity of flood control structures.

Backwater during high flow events causes several problems upstream of the dam including the potential flooding of approximately 200 structures and interference with the proper functioning of septic systems at residences, which creates the potential for raw sewage to spill into the Chikaskia River. Lake Blackwell also serves as a backup water supply for the City of Blackwell, Oklahoma. Alternatives will be considered that include options addressing removal of the logjam and a "no action" plan.

We are preparing documentation for compliance with the National Environmental Policy Act of 1969 and would appreciate comments from your agency concerning this proposed action.

-2-

If you have any questions or require additional information,
please contact Mr. Jerry Sturdy at 918-669-4397.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen L. Nolen". The signature is fluid and cursive, with the first name "Stephen" and last name "Nolen" clearly legible.

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

April 19, 2005

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Greg D. Duffy
Director
Oklahoma Department
of Wildlife Conservation
P.O. Box 53465
Oklahoma City, OK 73152-3465

Dear Mr. Duffy:

This is to inform you that the Tulsa District has been requested by the Lake Blackwell Trust Authority to study the feasibility of a clearing and snagging project to remove a logjam consisting of large trees and logs that has eliminated the ability to operate the flood gates at Lake Blackwell, Kay County, Oklahoma. Severe ice storms in 2001 resulted in higher than normal debris loads on the Chikaskia River, which has created a logjam that has exceeded the maintenance capability of the Authority. We are beginning the process of preparing an Environmental Assessment addressing the affect of alternatives that would allow removal of the logjam. The study is being conducted under authority of Section 208 of the Flood Control Act of 1954, as amended. The Act provides authority to the US Army Corps of Engineers to plan and implement clearing and snagging projects to protect the integrity of flood control structures.

Backwater during high flow events causes several problems upstream of the dam including the potential flooding of approximately 200 structures and interference with the proper functioning of septic systems at residences, which creates the potential for raw sewage to spill into the Chikaskia River. Lake Blackwell also serves as a backup water supply for the City of Blackwell, Oklahoma. Alternatives will be considered that include options addressing removal of the logjam and a "no action" plan.

We are preparing documentation for compliance with the National Environmental Policy Act of 1969 and would appreciate

-2-

comments from your agency addressing fish and wildlife species of concern that might occur in the project area.

If you have any questions or require additional information, please contact Mr. Jerry Sturdy at 918-669-4397.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen L. Nolen", with a long horizontal flourish extending to the right.

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

April 19, 2005

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Steve Thompson
Executive Director
Oklahoma Department
of Environmental Quality
P.O. Box 1677
Oklahoma City, OK 73101-1677

Dear Mr. Thompson:

This is to inform you that the Tulsa District has been requested by the Lake Blackwell Trust Authority to study the feasibility of a clearing and snagging project to remove a logjam consisting of large trees and logs that has eliminated the ability to operate the flood gates at Lake Blackwell, Kay County, Oklahoma. Severe ice storms in 2001 resulted in higher than normal debris loads on the Chikaskia River, which has created a logjam that has exceeded the maintenance capability of the Authority. We are beginning the process of preparing an Environmental Assessment addressing the affect of various alternatives that would allow removal of the logjam. The study is being conducted under authority of Section 208 of the Flood Control Act of 1954, as amended. The Act provides authority to the US Army Corps of Engineers to plan and implement clearing and snagging projects to protect the integrity of flood control structures.

Backwater during high flow events causes several problems upstream of the dam including the potential flooding of approximately 200 structures and interference with the proper functioning of septic systems at residences, which creates the potential for raw sewage to spill into the Chikaskia River. Lake Blackwell also serves as a backup water supply for the City of Blackwell, Oklahoma. Alternatives will be considered that include options addressing removal of the logjam and a "no action" plan.

-2-

We are preparing documentation for compliance with the National Environmental Policy Act of 1969 and would appreciate comments from your agency concerning this proposed action.

If you have any questions or require additional information, please contact Mr. Jerry Sturdy at 918-669-4397.

Sincerely,



Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch

DUANE A. SMITH
EXECUTIVE DIRECTOR

BRAD HENRY
GOVERNOR



STATE OF OKLAHOMA
WATER RESOURCES BOARD
www.owrb.state.ok.us

April 26, 2005

Stephen L. Nolen
USACE
Environment & Analysis Branch
USACE
1645 South 101st East Avenue
Tulsa, OK 74128-4609

Subject: Lake Blackwell Snag & Clearing Project Request

Dear Mr. Nolen:

The Oklahoma Water Resources Board supports this project to insure the integrity of Lake Blackwell and to continue to provide flood control for its watershed.

To improve the effectiveness of the project, we encourage the Lake Blackwell Trust Authority to prevent tree saplings and undergrowth from accumulating in the concrete flumes along each side of the spillway, mow the downstream slope at least annually, operate the valves in the outlet works of the intake tower and continue to add rip rap to areas as needed to prevent erosion. This dam is a low hazard dam on the OWRB Dam Inventory (OK10438, Kay County).

Thanks for asking for our input and continuing to work with us on this and many other very important water related concerns.

If you have any questions, please give me a call at (405) 530-8800.

Sincerely,

Duane A. Smith,
Executive Director



3800 N. CLASSEN BOULEVARD • OKLAHOMA CITY, OKLAHOMA 73118 • TELEPHONE (405) 530-8800 • FAX (405) 530-8900

Ervin Mitchell, Chairman • Lonnie L. Farmer, Vice Chairman • Bill Secrest, Secretary
Rudy Herrmann • Mark Nichols • Harry Currie • Richard C. Sevenoaks • Jack Keeley • Ed Fite

WILDLIFE CONSERVATION COMMISSION

Bruce Mabrey
CHAIRMAN
Bill Phelps
VICE CHAIRMAN
John D. Groendyke
SECRETARY
Mac Maguire
MEMBER

M. David Riggs
MEMBER
Harland Stonecipher
MEMBER
Lewis Stiles
MEMBER
Wade Brinkman
MEMBER



BRAD HENRY, GOVERNOR
GREG D. DUFFY, DIRECTOR

DEPARTMENT OF WILDLIFE CONSERVATION

1801 N. LINCOLN P.O. BOX 53465 OKLAHOMA CITY, OK 73105 PH. 521-3851

May 19, 2005

Mr. Stephen Nolen
Department of Army, Tulsa District
1645 South 101st. East Ave.
Tulsa, OK 74128-4609

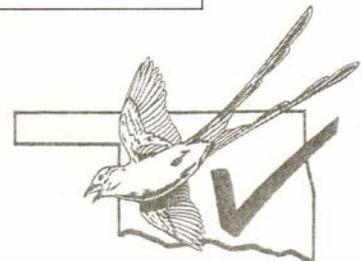
Re: Feasibility for a snagging and clearing project on Lake Blackwell, Kay County, Oklahoma

Dear Mr. Nolen,

The Oklahoma Department of Wildlife Conservation (ODWC) has received your letter dated April 19, 2005 concerning a snagging and clearing project to remove a logjam consisting of large trees and logs that has eliminated the ability to operate the flood gates at Lake Blackwell, Kay County, Oklahoma.

Please understand that due to time and personnel constraints, the ODWC has not performed an actual field survey of the proposed site location. The information sent to this office regarding the proposed project has been reviewed and compared against our current records for endangered and threatened species. Based on this review, three (3) Threatened (T) and Endangered (E) species have been known to occur in Kay County. These species are listed in the table below along with their associated status. For additional information regarding Federal species, please contact the USFWS, Ecological Services, 222 South Houston, Suite A, Tulsa, Ok. 74127 or visit them online at <http://ifw2es.fws.gov/Oklahoma/endsp.htm>.

Common Name	Scientific Name	Status
Interior Least Tern	<i>Sterna antillarum</i>	E
Bald Eagle	<i>Haliaeetus leucocephalus</i>	T
Piping Plover	<i>Charadrius melodus</i>	T

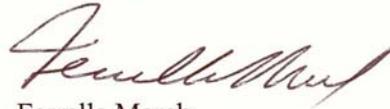


Search for the Scissortail
on Your State Tax Form

An Equal Opportunity Employer

The ODWC appreciates the opportunity to review and provide comments on this project. For further assistance, please contact the Natural Resources Section at 405-521-4663.

Sincerely,



Ferrella March
Natural Resources Biologist

APPENDIX B

SECTION 404 PERMIT

August 25, 2005

MEMORANDUM FOR CESWT-PE-P, ATTN: Shawneen O'Neill

SUBJECT; Lake Blackwell Debris Removal, Kay County, Oklahoma

1. A review pursuant to Section 404 of the Clean Water Act (CWA) has been completed in regards to the proposed Lake Blackwell debris removal. The project is located in the Northeast 1/4 of Section 34, Township 29 North, Range 2 West, near Braman, Kay County, Oklahoma.
2. The provided information does not indicate that a placement of dredged or fill material will be required, permanently or temporarily, into any "waters of the United States," including jurisdictional wetlands. Therefore, this proposal is not subject to regulation pursuant to Section 404 of the CWA, and a Department of the Army (DA) permit will not be required. Should the method of construction necessitate such a discharge into Lake Blackwell or any jurisdictional water, resubmit that portion of the project so that we may determine whether an individual DA permit will be required.
3. Although DA authorization is not required, this does not preclude the possibility that other Federal, State, or local permits may be required.
4. This project has been assigned Identification Number 14846. Refer to this number during future correspondence. If further assistance is required, contact Helen J. Williams at 918-669-7009.


David A. Manning
Chief, Regulatory Branch

APPENDIX C

CULTURAL RESOURCES COORDINATION



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

February 22, 2006

Planning and Environmental Division
Environmental Analysis and Compliance Branch

Mr. Chad Smith, Principal Chief
Cherokee Nation of Oklahoma
P.O. Box 948
Tahlequah, OK 74465

Dear Chief Smith:

This letter is to initiate Section 106 consultation for an undertaking sponsored by the Blackwell Lake Trust Authority, at Blackwell Lake, Kay County, Oklahoma. Federal funding will be utilized for a portion of this undertaking, which will be conducted by the U.S. Army Corps of Engineers, Tulsa District. The project area is located in the NE $\frac{1}{4}$ Section 34, Township 29 North, Range 2 West. The proposed project consists of the removal of log debris from the area around the dam and the immediate disposal of that debris.

Specific actions planned include the use of both marine-based equipment as well as standard debris transport. A barge-based crane will remove log debris from the lake and place it into dump trucks. Utilizing existing roads, dump trucks will transport the debris a short distance to a disposal site (4.5 acres) owned by the Blackwell Lake Trust Authority (see enclosed maps).

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

Any information or comments you may be able to provide will be appreciated. If you have any questions please contact Mr. Ken Shingleton at 918-669-7661.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen L. Nolen", is written over a horizontal line.

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch

Enclosures



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

February 22, 2006

Planning and Environmental Division
Environmental Analysis and Compliance Branch

Mr. Guy Munroe, Chairman
Kaw Nation of Oklahoma
Drawer 50
Kaw City, OK 74641

Dear Chairman Munroe:

This letter is to initiate Section 106 consultation for an undertaking sponsored by the Blackwell Lake Trust Authority, at Blackwell Lake, Kay County, Oklahoma. Federal funding will be utilized for a portion of this undertaking, which will be conducted by the U.S. Army Corps of Engineers, Tulsa District. The project area is located in the NE $\frac{1}{4}$ Section 34, Township 29 North, Range 2 West. The proposed project consists of the removal of log debris from the area around the dam and the immediate disposal of that debris.

Specific actions planned include the use of both marine-based equipment as well as standard debris transport. A barge-based crane will remove log debris from the lake and place it into dump trucks. Utilizing existing roads, dump trucks will transport the debris a short distance to a disposal site (4.5 acres) owned by the Blackwell Lake Trust Authority (see enclosed maps).

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

Any information or comments you may be able to provide will be appreciated. If you have any questions please contact Mr. Ken Shingleton at 918-669-7661.

Sincerely,

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch

Enclosures



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

February 22, 2006

Planning and Environmental Division
Environmental Analysis and Compliance Branch

Dr. Robert Brooks
Oklahoma Archeological Survey
111 E. Chesapeake
Norman, OK 73019-5111

Dear Dr. Brooks:

This letter is to initiate Section 106 consultation for an undertaking sponsored by the Blackwell Lake Trust Authority, at Blackwell Lake, Kay County, Oklahoma. Federal funding will be utilized for a portion of this undertaking, which will be conducted by the U.S. Army Corps of Engineers, Tulsa District. The project area is located in the NE $\frac{1}{4}$ Section 34, Township 29 North, Range 2 West. The proposed project consists of the removal of log debris from the area around the dam and the immediate disposal of that debris.

Specific actions planned include the use of both marine-based equipment as well as standard debris transport. A barge-based crane will remove log debris from the lake and place it into dump trucks. Utilizing existing roads, dump trucks will transport the debris a short distance to a disposal site (4.5 acres) owned by the Blackwell Lake Trust Authority (see enclosed maps).

Because the crane will be marine-based and because existing roads will be utilized by dump trucks, we believe there is very little potential for this project to affect historic properties. Additionally, the disposal site is located immediately adjacent to the existing Blackwell Lake dam, in an area that was likely heavily impacted in the construction of the lake. Accordingly, we request your comment on our opinion of "no historic properties affected" for this project. If you have any questions please contact Mr. Ken Shingleton at 918-669-7661.

Sincerely,

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch

Enclosures



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

February 22, 2006

Planning and Environmental Division
Environmental Analysis and Compliance Branch

Mr. Jim Gray, Principal Chief
Osage Nation of Oklahoma
P.O. Box 779
Pawhuska, OK 74056

Dear Chief Gray:

This letter is to initiate Section 106 consultation for an undertaking sponsored by the Blackwell Lake Trust Authority, at Blackwell Lake, Kay County, Oklahoma. Federal funding will be utilized for a portion of this undertaking, which will be conducted by the U.S. Army Corps of Engineers, Tulsa District. The project area is located in the NE $\frac{1}{4}$ Section 34, Township 29 North, Range 2 West. The proposed project consists of the removal of log debris from the area around the dam and the immediate disposal of that debris.

Specific actions planned include the use of both marine-based equipment as well as standard debris transport. A barge-based crane will remove log debris from the lake and place it into dump trucks. Utilizing existing roads, dump trucks will transport the debris a short distance to a disposal site (4.5 acres) owned by the Blackwell Lake Trust Authority (see enclosed maps).

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

Any information or comments you may be able to provide will be appreciated. If you have any questions please contact Mr. Ken Shingleton at 918-669-7661.

Sincerely,

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch

Enclosures



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

February 22, 2006

Planning and Environmental Division
Environmental Analysis and Compliance Branch

Mr. Charles Harwell, Chairman
Otoe-Missouria Tribe of Indians, Oklahoma
8151 Highway 77
Red Rock, OK 74651

Dear Chairman Harwell:

This letter is to initiate Section 106 consultation for an undertaking sponsored by the Blackwell Lake Trust Authority, at Blackwell Lake, Kay County, Oklahoma. Federal funding will be utilized for a portion of this undertaking, which will be conducted by the U.S. Army Corps of Engineers, Tulsa District. The project area is located in the NE $\frac{1}{4}$ Section 34, Township 29 North, Range 2 West. The proposed project consists of the removal of log debris from the area around the dam and the immediate disposal of that debris.

Specific actions planned include the use of both marine-based equipment as well as standard debris transport. A barge-based crane will remove log debris from the lake and place it into dump trucks. Utilizing existing roads, dump trucks will transport the debris a short distance to a disposal site (4.5 acres) owned by the Blackwell Lake Trust Authority (see enclosed maps).

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

Any information or comments you may be able to provide will be appreciated. If you have any questions please contact Mr. Ken Shingleton at 918-669-7661.

Sincerely,

A handwritten signature in black ink, reading "Stephen L. Nolen", is written over a horizontal line.

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch

Enclosures



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

February 22, 2006

Planning and Environmental Division
Environmental Analysis and Compliance Branch

Mr. George E. Howell, President
Pawnee Nation of Oklahoma
P.O. Box 470
Pawnee, OK 74058

Dear President Howell:

This letter is to initiate Section 106 consultation for an undertaking sponsored by the Blackwell Lake Trust Authority, at Blackwell Lake, Kay County, Oklahoma. Federal funding will be utilized for a portion of this undertaking, which will be conducted by the U.S. Army Corps of Engineers, Tulsa District. The project area is located in the NE $\frac{1}{4}$ Section 34, Township 29 North, Range 2 West. The proposed project consists of the removal of log debris from the area around the dam and the immediate disposal of that debris.

Specific actions planned include the use of both marine-based equipment as well as standard debris transport. A barge-based crane will remove log debris from the lake and place it into dump trucks. Utilizing existing roads, dump trucks will transport the debris a short distance to a disposal site (4.5 acres) owned by the Blackwell Lake Trust Authority (see enclosed maps).

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

Any information or comments you may be able to provide will be appreciated. If you have any questions please contact Mr. Ken Shingleton at 918-669-7661.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen L. Nolen", is written over a horizontal line.

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch

Enclosures



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

February 22, 2006

Planning and Environmental Division
Environmental Analysis and Compliance Branch

Mr. Dwight Buffalo Head, Chairman
Ponca Tribe of Indians of Oklahoma
20 White Eagle Drive
Ponca City, OK 74601

Dear Chairman Buffalo Head:

This letter is to initiate Section 106 consultation for an undertaking sponsored by the Blackwell Lake Trust Authority, at Blackwell Lake, Kay County, Oklahoma. Federal funding will be utilized for a portion of this undertaking, which will be conducted by the U.S. Army Corps of Engineers, Tulsa District. The project area is located in the NE $\frac{1}{4}$ Section 34, Township 29 North, Range 2 West. The proposed project consists of the removal of log debris from the area around the dam and the immediate disposal of that debris.

Specific actions planned include the use of both marine-based equipment as well as standard debris transport. A barge-based crane will remove log debris from the lake and place it into dump trucks. Utilizing existing roads, dump trucks will transport the debris a short distance to a disposal site (4.5 acres) owned by the Blackwell Lake Trust Authority (see enclosed maps).

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

Any information or comments you may be able to provide will be appreciated. If you have any questions, please contact Mr. Ken Shingleton at 918-669-7661.

Sincerely,

A handwritten signature in black ink, reading "Stephen L. Nolen", is written over a horizontal line.

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch

Enclosures



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

February 22, 2006

Planning and Environmental Division
Environmental Analysis and Compliance Branch

Dr. Bob Blackburn
State Historic Preservation Officer
Oklahoma Historical Society
2704 Villa Prom, Shepherd Mall
Oklahoma City, OK 73107

Dear Dr. Blackburn:

This letter is to initiate Section 106 consultation for an undertaking sponsored by the Blackwell Lake Trust Authority, at Blackwell Lake, Kay County, Oklahoma. Federal funding will be utilized for a portion of this undertaking, which will be conducted by the U.S. Army Corps of Engineers, Tulsa District. The project area is located in the NE $\frac{1}{4}$ Section 34, Township 29 North, Range 2 West. The proposed project consists of the removal of log debris from the area around the dam and the immediate disposal of that debris.

Specific actions planned include the use of both marine-based equipment as well as standard debris transport. A barge-based crane will remove log debris from the lake and place it into dump trucks. Utilizing existing roads, dump trucks will transport the debris a short distance to a disposal site (4.5 acres) owned by the Blackwell Lake Trust Authority (see enclosed maps).

Because the crane will be marine-based and because existing roads will be utilized by dump trucks, we believe there is very little potential for this project to affect historic properties. Additionally, the disposal site is located immediately adjacent to the existing Blackwell Lake dam, in an area that was likely heavily impacted in the construction of the lake. Accordingly, we request your comment on our opinion of "no historic properties affected" for this project. If you have any questions please contact Mr. Ken Shingleton at 918-669-7661.

Sincerely,

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch

Enclosures



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

February 22, 2006

Planning and Environmental Division
Environmental Analysis and Compliance Branch

Mr. Carl Martin, President
Tonkawa Tribe of Indians of Oklahoma
1 Rush Buffalo Road
Tonkawa, OK 74653

Dear President Martin:

This letter is to initiate Section 106 consultation for an undertaking sponsored by the Blackwell Lake Trust Authority, at Blackwell Lake, Kay County, Oklahoma. Federal funding will be utilized for a portion of this undertaking, which will be conducted by the U.S. Army Corps of Engineers, Tulsa District. The project area is located in the NE $\frac{1}{4}$ Section 34, Township 29 North, Range 2 West. The proposed project consists of the removal of log debris from the area around the dam and the immediate disposal of that debris.

Specific actions planned include the use of both marine-based equipment as well as standard debris transport. A barge-based crane will remove log debris from the lake and place it into dump trucks. Utilizing existing roads, dump trucks will transport the debris a short distance to a disposal site (4.5 acres) owned by the Blackwell Lake Trust Authority (see enclosed maps).

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

Any information or comments you may be able to provide will be appreciated. If you have any questions please contact Mr. Ken Shingleton at 918-669-7661.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen L. Nolen", is written over a horizontal line.

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch

Enclosures



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

February 22, 2006

Planning and Environmental Division
Environmental Analysis and Compliance Branch

Mr. Gary McAdams, President
Wichita and Affiliated Tribes of Oklahoma
P.O. Box 729
Anadarko, OK 73005

Dear President McAdams:

This letter is to initiate Section 106 consultation for an undertaking sponsored by the Blackwell Lake Trust Authority, at Blackwell Lake, Kay County, Oklahoma. Federal funding will be utilized for a portion of this undertaking, which will be conducted by the U.S. Army Corps of Engineers, Tulsa District. The project area is located in the NE $\frac{1}{4}$ Section 34, Township 29 North, Range 2 West. The proposed project consists of the removal of log debris from the area around the dam and the immediate disposal of that debris.

Specific actions planned include the use of both marine-based equipment as well as standard debris transport. A barge-based crane will remove log debris from the lake and place it into dump trucks. Utilizing existing roads, dump trucks will transport the debris a short distance to a disposal site (4.5 acres) owned by the Blackwell Lake Trust Authority (see enclosed maps).

Please review this area for information that you may be willing to share with us on archaeological or historic sites, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

Any information or comments you may be able to provide will be appreciated. If you have any questions please contact Mr. Ken Shingleton at 918-669-7661.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen L. Nolen", is written over a horizontal line.

Stephen L. Nolen
Chief, Environmental Analysis
and Compliance Branch

Enclosures



Oklahoma Archeological Survey

THE UNIVERSITY OF OKLAHOMA

February 27, 2006

Stephen L. Nolen
Department of the Army
Corps of Engineers, Tulsa District
1645 South 101st East Avenue
Tulsa, Oklahoma 74128-4609

Re: Proposed removal of debris at Lake Blackwell, Blackwell Lake Trust Authority. Legal Description: NE ¼ Section 34 T29N R2W, Kay County, Oklahoma.

Dear Mr. Nolen:

The Community Assistance Program staff of the Oklahoma Archeological Survey has reviewed the above referenced project in order to identify potential areas that may contain prehistoric or historic archaeological materials (historic properties). The location of your project has been crosschecked with the state site files containing approximately 18,000 archaeological sites that are currently recorded for the state of Oklahoma. No sites are listed as occurring within your project area, and based on the topographic and hydrologic setting; no archaeological materials are likely to be encountered. Thus an archaeological field inspection is not considered necessary. However, should construction activities expose buried archaeological materials such as chipped stone tools, pottery, bone, historic crockery, glass, metal items or building materials, this agency should be contacted immediately at (405) 325-7211. A member of our staff will be sent to evaluate the significance of these remains.

This environmental review and evaluation is performed in order to locate, record, and preserve Oklahoma's prehistoric and historic cultural heritage in cooperation with the State Historic Preservation Office, Oklahoma Historical Society. In addition to our review comments, under 36CFR Part 800.3 you are reminded of your responsibility to consult with the appropriate Native American tribe/groups to identify any concerns they may have pertaining to this undertaking and potential impacts to properties of traditional and/or ceremonial value. Thank you.

Sincerely,

Staff Archaeologist


Robert L. Brooks
State Archaeologist

:ls

Cc: SHPO



Oklahoma Historical Society

Founded May 27, 1893

State Historic Preservation Office • 2704 Villa Prom • Shepherd Mall • Oklahoma City, OK 73107-2441
Telephone 405/521-6249 • Fax 405/947-2918

March 17, 2006

Mr. Stephen L. Nolen
Chief, Environmental Analysis & Compliance Branch
Tulsa District Corps of Engineers
1645 South 101st East Ave.
Tulsa, OK 74128-4609

RE: File #1146-06; Blackwell Lake Trust Removal & Disposal of Log
Debris

Dear Mr. Nolen:

We have received and reviewed the documentation concerning the referenced project in Kay County. Additionally, we have examined the information contained in the Oklahoma Landmarks Inventory (OLI) files and other materials on historic resources available in our office. We find that there are no historic properties affected by the referenced project.

Thank you for the opportunity to comment on this project. We look forward to working with you in the future.

If you have any questions, please contact Charles Wallis, RPA, Historical Archaeologist, at 405/521-6381.

Should further correspondence pertaining to this project be necessary, the above underlined file number must be referenced. Thank you.

Sincerely,

Melvena Heisch
Deputy State Historic
Preservation Officer

MH:bh

APPENDIX D

PUBLIC COMMENTS

APPENDIX E

NEWSPAPER PUBLIC NOTICE